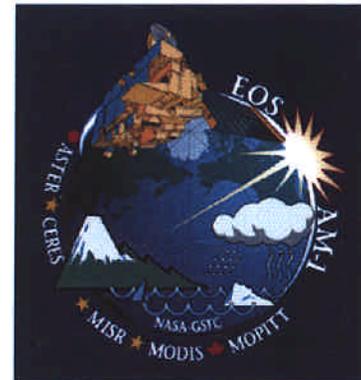
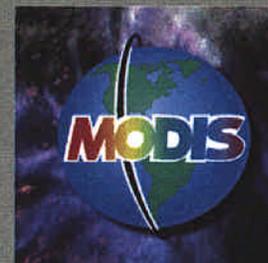
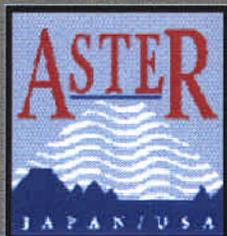




EOS AM-1 Status MODIS Science Team Meeting



June 24, 1998



Development Status

- **Instruments, Equipment Modules and Major Assemblies Have Been Successfully Tested, Delivered, and Integrated On Spacecraft**
- **Successfully completed 6 Week Systems Thermal Vacuum**
 - Completed CERES and MOPITT Post TN Rework
 - S-band Transponders Reworked
- **Pre-Acoustics Deployment Testing Successfully Completed**
 - Solar Array
 - High Gain Antenna
- **Adding Calibration Maneuver Capability**
 - Flight Software Mods In Process
- **End-to-end Testing With the Ground System**
 - Several successful tests have been run since 1/97
 - Demonstrated command and control capability with EOC

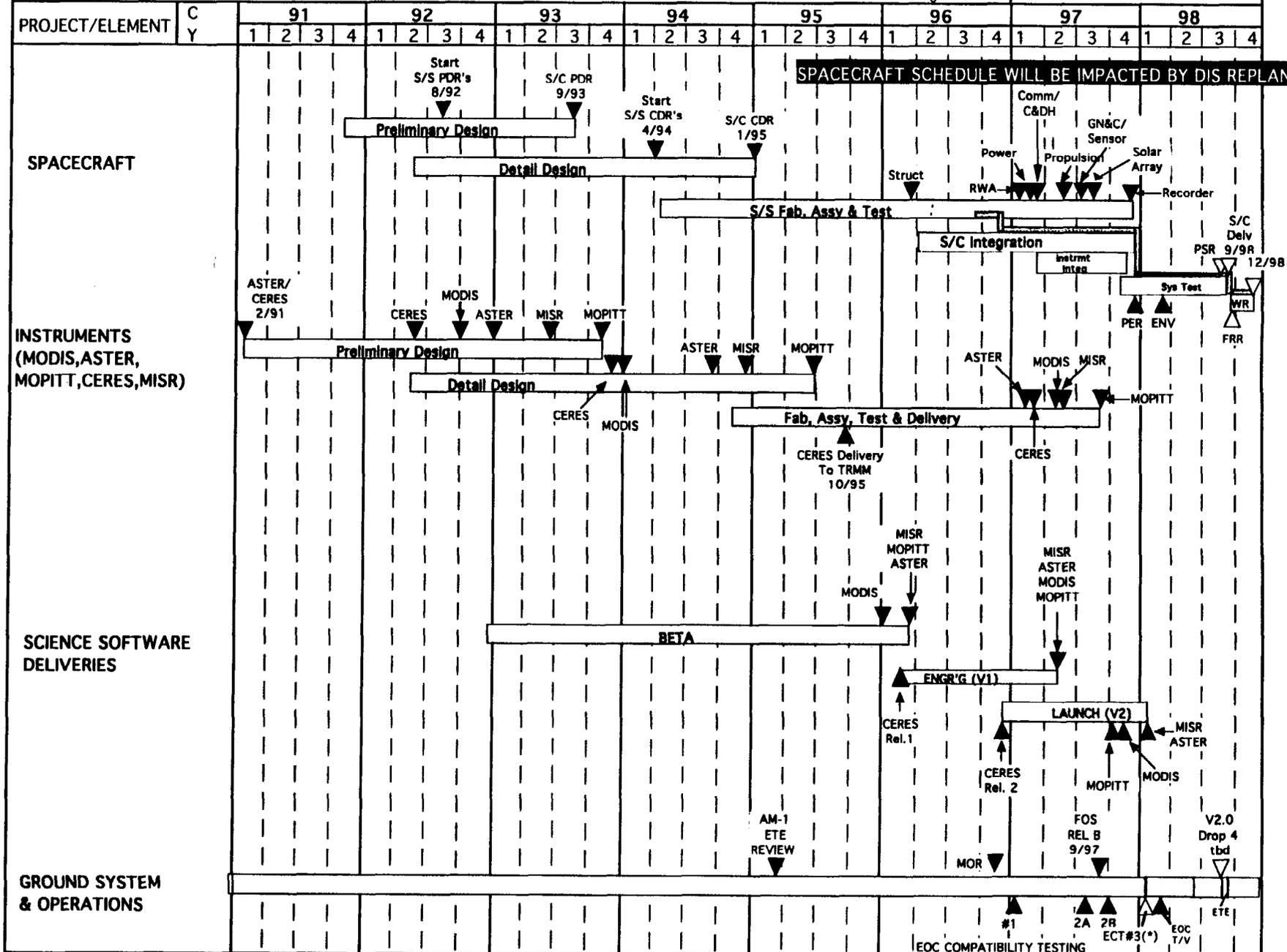
Status (cont'd)

- **Flight Operations Documentation Generated**
 - On-orbit Activation Timeline Being Worked Weekly
- **ATLAS IIAS Launch Vehicle On Stand**
 - Successfully Completed Matchmate tests
- **Launch Site Facilities Completed**
 - **Air Force and NASA pathfinder activities successfully completed**
 - . Utilized AM-1 fairing
 - . Access and Contamination
 - **Astrotech processing facility ready to process AM-1**
 - . Demonstrated ability to process fairing and encapsulate spacecraft during pathfinder activity
- **Transportation Equipment Is Developed**
 - Transporter completed
 - Conducted C5A and road transportation tests
- **Completed Little's Review of AM-1**
 - Part of a management review of several EOS projects

EOS AM-1 PROJECT MASTER SCHEDULE

Orig. Approval 8/30/93
 Status As Of 05/31/98

Page 1 of 1



(*) ECT#3 separated into 5 drops/tests

Flight Projects Directorate

Week Of: 06/23/98

Top Ten

Project: EOS AM

Problem/Issue	Impact/Concern	Action	Status
EOC Functionality and Availability.	Inability to operate the spacecraft as it was tested and planned. Ability to train FOT.	ESDIS Project developed patches in V.2.2.0 and stability test to provide functionality in end of 4/98. ESDIS and EOS AM-1 developing revised integrated schedule for training and system testing.	V.2.2.0 delivery does not support a flight ready configuration. Revised integrated schedule under development. FOS alternative initiated. First demonstration of the alternative system looks promising.
Solar Array Susceptibility to Charging.	LORAL high voltage arrays failed in late 1997 due to charging in GEO environment.	TRW, LMMS, GSFC, LeRC, and Loral consultant analyzing relevancy to EOS AM-1 and developing a test plan for the Q-board.	Preliminary results from second-phase testing confirmed results from Phase 1 testing of arcing. Testing for sustaining arcs is beginning. Initiated activities to look at plasma contactor as a fix.
MISR Optocouplers	Similar devices have been shown to be susceptible to protons.	Perform radiation testing on samples of identical parts and a potential replacement part.	Proton test of opto-couplers completed. Quick look at results looks encouraging. Detailed assessment by JPL in process.
White Sands Receiver Data Pattern Sensitivity.	Science data bit transition density during low contrast scenes have the potential to result in loss of lock at White Sands receiver.	Run signal-to-noise tests at White Sands. First test using various sets of taped science data. Second test using Valley Forge receiver with White Sands equipment.	Equipment for test being assembled. Some of the data tapes to be generated during spacecraft functional testing. GSFC/LMMS Team to visit White Sands to characterize the White Sands and Valley Forge receivers at the end of June.
1553 Bus Retries	Reliable communications on the C&T bus may be compromised.	Isolate the problem & determine whether or not a fix is required.	Troubleshooting the cause of reflections on the bus. Terminating CERES, MISR, ASTER, RTS did not help. The GSFC C&DH test bed is being reconfigured to evaluate the problem.
Loose Connector on Flight Solar Array Drive.	Possibility that connector mounting screw becomes loose during launch.	Exploring options to stake connector screws without removing SAD from spacecraft and disassembling.	Testing demonstrated that using a center punch to dimple the thread of the screw and apply epoxy will work. Implementation on the flight unit is underway.

ACE Side B RWA 3 & 4 Tachometer Noise Spikes.	Repair to ACE Side B.	Identify Cause of spurrilous bit change on ACE side B.	Bit flips have occurred on both ACE's. Data review is attempting to isolate this problem. Software fix completed.
MODIS CPA Resets; S/MWIR Electronic Crosstalk	Possible failure mode of one side of MODIS at cold temperature extreme; crosstalk exceeds spec in some bands.	Identify cause of resets. NOTE: MODIS like CERES aft is close to chamber test equipment. Science team to identify impacts to level 1 data products.	Resets only occur under cold non-operational conditions. Thermal analysis in process. T/V review scheduled for June 2. Final mid July. Algorithmic correction solution being worked. Potential H/W solution under assessment.
Personnel Retention	Launch slip will cause loss of key personnel across the board.	Work with contractors & instrument teams to ensure key personnel availability till launch.	Ongoing exercise. Evaluating incentives for contractors.

Summary

- **Observatory integration and test phase nearing completion**
 - Hard work, long hours and perseverance
 - Acoustics and sock testing are final environmental tests
 - Complete final appendage deployments
 - Perform final Comprehensive Performance Test (CPT)
- **Shift focus to operations, particularly instruments**
 - Procedures and activation timeline
 - Command and telemetry databases
 - FOT training and simulations
 - Contingency planning
- **Continue FOS debug/testing and AMOC development**
- **Launch vehicle is ready and on pad**
- **Launch site processing facilities ready for AM-1**

EOS AM-1 HAS BEEN COMPLETELY INTEGRATED AND IS THREE WEEKS FROM COMPLETING ITS ENVIRONMENTAL TEST PROGRAM